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EXAMINER

HUYNH, PHUONG

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/583,443	Applicant(s) BURGHARDT ET AL.	
	Examiner PHUONG HUYNH	Art Unit 2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01/03/2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 15-21, and 25-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Brown et al. (hereinafter “Brown”) (US Patent No. 6,868,358).

Regarding claim 15, Brown discloses a method for monitoring the pressure of motor vehicle tires comprising the acts of:

determining a tire pressure value indicative of a tire filling pressure [see Brown: col. 6, lines 53-55]; comparing the determined tire pressure value with stored nominal value and determining whether a motor vehicle tire is at an incorrect tire pressure, based upon a result of the comparison [see Brown: Abstract; col. 6, lines; col. 8, lines 21-33]; wherein when the difference [see Brown: col. 7, lines 15-30] between the determined tire pressure value and the stored nominal value exceeds a predetermined threshold value, the stored nominal value is replaced by a new nominal value with the determined tire pressure value being used to determine the new nominal value [see Brown: col. 7, lines 39-47 for “providing a reliable value to compare against the tire

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inflation warning condition"; and col. 11, lines 32-50] [also see Brown: col. 8, lines 25-42;; col. 11, lines 49; and col. 12, lines 6-18].

Regarding claim 16, Brown discloses that the comparison of the determined tire pressure value with the stored nominal value, determined at an earlier time, is used to determine whether a characteristic change has occurred in the tire pressure value [see Brown: col. 8, lines 21-42; and col. 16, lines 12-25].

Regarding claim 17, Brown discloses that characteristic change in the tire pressure value occurs when the difference between the determined tire pressure value and the stored nominal value is greater than the predetermined threshold [see Brown: col. 15, line 62-col. 16, line 25].

Regarding claim 18, Brown discloses that the characteristic change in the tire pressure value occurs when the difference between the determined tire pressure value and the stored nominal value is greater than the predetermined threshold value for at least two wheels [see Brown: col. 1, lines 62-67; and col. 15, line 62-col. 16, line 25].

Regarding claim 19, Brown discloses that the threshold value is 0.2 bar [see Brown: col. 12, lines 45-55 and Figure 10].

Although Brown does not explicitly disclose “0.2 bar”, it is still that Brown discloses the claimed “0.2 bar” because Brown discloses at col. 12, lines 45-55 that “Using a threshold value near 1 (e.g. 0.9995) sets a logical warning of 1, or true, on the second switch for an immediate caution warning. The driver would receive an immediate caution warning that a pressure and leak rate condition existed which requires attention. The switch then enables a block that computes time left to reach the critical low pressure value for display to the driver. This *warning block activates* at the pressure and leak rate combinations in FIG. 10 where the utility is 1”, wherein the pressure value is at 200 kPa that is equivalent to 0.2bar.

Regarding claim 20, Brown discloses that the characteristic change in the tire pressure value occurs only when the vehicle has been stopped or started between a time of determination of the determined tire pressure value and the earlier time of storage of the stored nominal values [see Brown: col. 13, line 64- col. 14, line 16; and col. 8, lines 21-42; and col. 16, lines 12-25].

Regarding claim 21, Brown discloses wherein the determined tire pressure value is subjected to a plausibility check if the characteristic change in the tire pressure value has been determined and the determined tire pressure value is stored as a comparison value only if the determined tire pressure value is classified as plausible [see Brown: col. 8, lines 21-42].

Regarding claim 25, Brown discloses that wherein a tire temperature and an ambient temperature are determined, and the tire pressure value is classified as plausible only when a difference between the tire pressure and the ambient temperature is less than a predetermined threshold value of 40 K [see Brown: col. 3, lines 27-52; col. 6, lines 15-50; col. 8, lines 21-42].

Although Brown does not disclose “less than a predetermined threshold value of **40K**”, Brown discloses that “By way of illustration, FIG. 2 illustrates a graph comparing empirically measured data taken of a tire at two inflation pressures, 220 kPa and 154 kPa, versus the temperature difference from ambient in degrees Kelvin. As speed increases, the temperature within a tire cavity increases. Plotting the gauge pressure against the temperature differential creates the data points at the two pressures shown in FIG. 2. It will be seen that the speed and load data from FIG. 2 can be fit to linear equation 4. The pressure and temperature have a well-defined relationship over a wide range of speeds and loads and fit lines 26, 28 at respective pressures. The intercept of the lines so defined by the measured data may be determined and represents the gauge pressure at ambient temperature” and the range can be seen in Figure 2 as less than 40K. Therefore, Brown still discloses the range of “less than 40K”.

Regarding claim 26, Brown discloses that wherein the tire pressure value is classified as plausible only when the respective plausible conditions are satisfied for at least 3 minutes [see Brown: col. 8, lines 21-42; col. 15, lines 25-35].

Regarding claim 27, Brown discloses wherein a tire temperature value is determined, and the tire temperature value is used for determination of the tire pressure values [see Brown: col. 5, lines 2-50].

Regarding claim 28, Brown discloses wherein temperature influence is compensated for in the determination of the tire pressure values [see Brown: col. 7, lines 39-47].

Regarding claim 29, Brown discloses that the threshold value is 0.2 bar [see Brown: col. 12, lines 45-55 and Figure 10].

Although Brown does not explicitly disclose “0.2 bar”, it is still that Brown discloses the claimed “0.2 bar” because Brown discloses at col. 12, lines 45-55 that “Using a threshold value near 1 (e.g. 0.9995) sets a logical warning of 1, or true, on the second switch for an immediate caution warning. The driver would receive an immediate caution warning that a pressure and leak rate condition existed which requires attention. The switch then enables a block that computes time left to reach the critical low pressure value for display to the driver. This *warning block* activates at the

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pressure and leak rate combinations in FIG. 10 where the utility is 1", wherein the pressure value is at 200 kPa that is equivalent to 0.2bar.

Regarding claims 30-32, Brown discloses that the characteristic change in the tire pressure value occurs only when the vehicle has been stopped or started between a time of determination of the determined tire pressure value and the earlier time of storage of the stored nominal values [see Brown: col. 13, line 64-col. 14, line 16; and col. 8, lines 21-42; and col. 16, lines 12-25].

Regarding claims 33 and 34, Brown discloses wherein the determined tire pressure value is subjected to a plausibility check if the characteristic change in the tire pressure value has been determined and the determined tire pressure value is stored as a comparison value only if the determined tire pressure value is classified as plausible [see Brown: col. 8, lines 21-42].

Regarding claim 35, Brown discloses a method for monitoring the pressure of motor vehicle tires, comprising the acts of:

determining a tire pressure value indicative of a tire filling pressure [see Brown: col. 6, lines 53-55];

comparing the determined tire pressure value with a stored nominal value; and

determining whether a motor vehicle tire is at an incorrect tire pressure, based upon a result of the comparison[see Brown: Abstract; col. 6, lines; col. 8, lines 21-33];

wherein the method further comprises detecting changes in said determined tire pressure [see Brown: col. 8, lines 25-42; col. 11, lines 49; and col. 12, lines 6-18] and a temporal course thereof [i.e. time varying value, see Brown's prediction of a time period at which the pressure will fall below some specified values, for example, in Brown, col. 8, line 50-col. 9, line 2; or "leak rate at which pressure changes over time" concept in Brown, col. 9, lines 55-62]; when the temporal course of a change in air pressure follows a pattern that is indicative of a filling of the tire by an operator [col. 7, lines 39-50], replacing the stored nominal value by a new nominal value, with the determined tire pressure value being used to establish the new nominal value [see Brown: col. 7, lines 39-47 for "providing a reliable value to compare against the tire inflation warning condition"; and col. 11, lines 32-50 [also see Brown: col. 8, line 50-col. 9, line 2]

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (hereinafter "Brown") (US Patent No. 6,868,358) in view of Lin et al. (hereinafter "Lin") (US Patent Application Pub. No. 2002/0024432).

Regarding claim 22, Brown discloses the plausibility [see Brown col. 8, lines 21-42]; However, Brown does not disclose wherein the tire pressure value is classified as plausible *only if the difference between the tire pressure value and a further tire pressure value associated with a same vehicle axle and an opposite side is less than a predetermined threshold* value of 0.4 bar.

Lin teaches the tire pressure value is classified as plausible only if the difference between the tire pressure value and a further tire pressure value associated with a same vehicle axle and an opposite side is less than a predetermined threshold value of 0.4 bar [see Lin: Paragraphs [0031]; Paragraph [0041]].

It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Brown to include the method, as taught by Lin, to avoid intruding upon the driver [see Lin: Paragraphs [0031]; Paragraph [0041]].

Regarding claim 23, Brown discloses the plausibility [see Brown col. 8, lines 21-42]; However, Brown does not disclose wherein the tire pressure value is classified as

plausible only *when all the determined tire pressure values are above a predetermined threshold value of 1.6 bar.*

Lin teaches wherein the tire pressure value is classified as plausible only when all the determined tire pressure values are above a predetermined threshold value of 1.6 bar [see Lin: Paragraphs [0031], [0038]].

It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Brown to include the method, as taught by Lin, generate an alarm every 2 minutes until the abnormal state is disengaged [see Lin: Paragraphs [0031]; Paragraph [0038]].

5. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (hereinafter "Brown") (US Patent No. 6,868,358) in view of Boesch (US Patent No. 6,118,369).

Regarding claim 24, Brown discloses the plausibility [see Brown col. 8, lines 21-42];

However, Brown does not disclose that wherein the tire pressure value is classified as plausible only when the determined tire pressure value associated with a rear vehicle axle is greater the mean value of determined tire pressure values associated with a front vehicle axle minus a predetermined constant.

Boesch teaches wherein the tire pressure value is classified as plausible only when the determined tire pressure value associated with a rear vehicle axle is greater the mean value of determined tire pressure values associated with a front vehicle axle minus a predetermined constant [see Boesch: col. 3, lines 19-43; col. 7, lines 35-51]. Although Boesch does not explicitly teaches the "predetermined constant" one having ordinary skill in the art would recognize that it is well known in the art to subtract predetermined constants to account for better conversion and therefore it would have been obvious to one having ordinary skill in the art to subtract such a constant for a better conversion to return the same amount and determine an absolute value of a calibrated metric to provide confidence that a low tire condition has been consistently detected [see Boesch: col. 3, lines 19-43; col. 7, lines 35-51].

Response to Arguments

6. The amendment to claims 15-34 is sufficient to overcome the rejections under 35 U.S.C 112, second paragraph. Therefore, the rejection of claims 15-34 under 35 U.S.C 112, second paragraph is withdrawn.

7. Applicant's arguments filed 01/03/2008 have been fully considered but they are not persuasive.

Regarding amended claim 15, Applicant argue that Brown does not teach the amended claim limitation " wherein when the difference between the determined tire

pressure value and the stored nominal value exceeds a predetermined threshold value, the stored nominal value is replaced by a new nominal value with the determined tire pressure value being used to determine the new nominal value” [see Applicant’s Remarks: Pages 10-11].

Accordingly, Brown discloses the amended claim limitation “wherein when the difference [see Brown: col. 7, lines 15-30] between the determined tire pressure value and the stored nominal value exceeds a predetermined threshold value, the stored nominal value is replaced by a new nominal value with the determined tire pressure value being used to determine the new nominal value [see Brown: col. 7, lines 39-47 for “providing a reliable value to compare against the tire inflation warning condition”; and col. 11, lines 32-50] [also see Brown: col. 8, lines 25-42;; col. 11, lines 49; and col. 12, lines 6-18]”. Please also see the above rejection.

For new claim 35, please see the above rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUONG HUYNH whose telephone number is (571)272-2718. The examiner can normally be reached on M-F: 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on 571-272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Phuong Huynh
Examiner
Art Unit 2857

/P. H./
Examiner, Art Unit 2857
March 27, 2008

/Jeffrey R. West/
Primary Examiner, Art Unit 2857